

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



PCT

(43) International Publication Date
24 February 2005 (24.02.2005)

(10) International Publication Number
WO 2005/016224 A3

(51) International Patent Classification⁷:

A61K 7/46

(21) International Application Number:

PCT/IB2004/002531

(22) International Filing Date: 23 July 2004 (23.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PCT/IB03/03861 18 August 2003 (18.08.2003) IB

(71) Applicant (for all designated States except US):
AVESTHA GENGRAINE TECHNOLOGIES PVT LTD [IN/IN]; "Discoverer" 9th floor, Unit 3, International Technology Park, Whitefield Road, Bangalore 560 066 (IN).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **PATELL, Viloo, Morawala** [IN/IN]; Avestha Gengraine Technologies Pvt. Ltd., "Discoverer", 9th Floor, Unit 3, International Tech Park, Whitefield Road, Bangalore 560 066 (IN).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

[Continued on next page]

(54) Title: NOVEL THERAPEUTIC EXTRACTS AND MOLECULES FOR DEGENERATIVE CONDITIONS

(57) **Abstract:** In this invention we have characterized plant extracts derived from common plants used in Indian traditional medicine using a) chemical fingerprinting by HPLC and b) etiology based in-vitro cell assays in order to reduce the extracts to minimum constituent to use for therapeutic purpose against degenerative conditions like cardiovascular diseases, Diabetes mellitus, Hypertension, All types of Cancers, Obesity & weight problems, Arthritis & pain, Alzheimer's disease, Multiple sclerosis & Autoimmune diseases, Asthma & Allergies, Osteoporosis & bone health, Parkinson's disease, Stress, Disorders & diseases of the eye. The current status of the extracts is that all of them have been chemically fingerprinted and have gone through assays to screen anti-diabetic activity. Thus currently we are applying for the specific leads that have shown very specific antidiabetic activity. However we are also working in parallel, to test these extracts in other assays, for generating information of there applicability in the prevention or treatment of degenerative conditions as mentioned above. As and when we will have data to support disease specific application of individual extracts we will amend our claims accordingly. The present invention relates to a composition for curing or treating degenerative disorders, a process for the preparation of the same, and usage of the same and, more particularly, to the composition having as a major component a single extract or multiple extracts containing therapeutically relevant bioactive, obtained from a certain kind of plant/plants and being capable of lowering or reducing a level of glucose in the blood of a patient suffering from diabetes mellitus by alleviating or ameliorating various symptoms caused by or associated with the diabetes mellitus as well as preventing the glucose level in the blood of the diabetic patient with high certainty from arising again. The invention also relates to the in-vitro screening of plant extracts for anti-diabetic activities in multiple cell based and biochemical systems. Studies have shown eleven potential leads, which are very valuable as they could lead to bioactives having therapeutic activity in the treatment of like cardiovascular diseases, Diabetes mellitus, Hypertension, All types of Cancers, Obesity & weight problems, arthritis and pain, Alzheimer's disease, multiple sclerosis and autoimmune diseases, asthma and allergies, osteoporosis and bone health, Parkinson's disease, stress, disorders and diseases of the eye.

WO 2005/016224 A3



SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

(88) Date of publication of the international search report:

16 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.